

WHAT IS CLAIMED IS:

1. A luminescence device, comprising: an organic compound layer comprising a metal coordination compound having a partial structure represented by the
5 following formula (1):



wherein each of N and C represents an atom constituting a cyclic group.

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2. A device according to Claim 1, wherein the metal coordination compound is represented by any one of the following formulas (1-1) to (1-6):

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wherein CyN1 and CyN2 independently denote a cyclic
5 group containing a nitrogen atom connected to Pt and
capable of having a substituent, and CyC1 and CyC2
independently denote a cyclic group containing a
carbon atom connected to Pt and capable of having a
substituent, each of the substituents for CyN1, CyN2,
10 CyC1 and CyC2 being selected from the group consisting
of a halogen atom; nitro group; a trialkylsilyl group
containing three linear or branched alkyl groups each
independently having 1 - 8 carbon atoms; and a linear
or branched alkyl group having 1 - 20 carbon atoms
15 capable of including one or at least two non-
neighboring methylene groups which can be replaced
with -O-, -S-, -CO-, -CO-O-, -O-CO-, -CH=CH- or -C≡C-
and capable of including a hydrogen atom which can be
replaced with a fluorine atom.

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3. A device according to Claim 2, wherein the
metal coordination compound is represented by the
formula (1-1) or the formula (1-2).

25 4. A device according to Claim 2, wherein at
least one of CyN1 and CyN2 in the formulas (1-1) to
(1-6) is a substituted or unsubstituted cyclic group

having a ring structure selected from the group consisting of pyridine, pyrimidine, pyrazoline, pyrrole, pyrazole, quinoline, isoquinoline, and quinoxaline.

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5. A device according to Claim 2, wherein at least one of CyC1 and CyC2 in the formulas (1-1 to (1-6) is a substituted or unsubstituted cyclic group selected from the group consisting of phenyl,

10 naphthyl, thienyl, benzothienyl, and quinolyl.

6. A device according to Claim 1, further comprising a pair of electrodes oppositely disposed to sandwich the organic compound layer, wherein a voltage 15 is applied between the pair of electrodes to cause luminescence.

7. A metal coordination compound, adapted for use in a luminescence device, having a partial 20 structure represented by the following formula (1):



wherein each of N and C represents an atom constituting a cyclic group.

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8. A compound according to Claim 7, which is represented by any one of the following formulas (1-1)

to (1-6):



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wherein CyN1 and CyN2 independently denote a cyclic group containing a nitrogen atom connected to Pt and capable of having a substituent, and CyC1 and CyC2 independently denote a cyclic group containing a carbon atom connected to Pt and capable of having a substituent, each of the substituents for CyN1, CyN2, CyC1 and CyC2 being selected from the group consisting of a halogen atom; nitro group; a trialkylsilyl group



containing three linear or branched alkyl groups each independently having 1 - 8 carbon atoms; and a linear or branched alkyl group having 1 - 20 carbon atoms capable of including one or at least two non-
5 neighboring methylene groups which can be replaced with -O-, -S-, -CO-, -CO-O-, -O-CO-, -CH=CH- or -C≡C- and capable of including a hydrogen atom which can be replaced with a fluorine atom.

10 9. A compound according to Claim 8, which is represented by the formula (1-1) or the formula (1-2).

15 10. A compound according to Claim 8, wherein at least one of CyN1 and CyN2 in the formulas (1-1) to (1-6) is a substituted or unsubstituted cyclic group having a ring structure selected from the group consisting of pyridine, pyrimidine, pyrazoline, pyrrole, pyrazole, quinoline, isoquinoline, and quinoxaline.

20 25 11. A compound according to Claim 8, wherein at least one of CyC1 and CyC2 in the formulas (1-1 to (1-6) is a substituted or unsubstituted cyclic group selected from the group consisting of phenyl, naphthyl, thienyl, benzothienyl, and quinolyl.